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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,795	03/16/2004	Lawrence J. Dickson	29381/04000	1927

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EXAMINER

JOHNSON, STEPHEN

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/801,795

Applicant(s)

DICKSON, LAWRENCE J.

Examiner

Stephen M. Johnson

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 9-11, 21 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 12-20, 22, 23 and 25-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-27 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/2004</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 3641

1. Applicant's election with traverse of species A directed to a metallic facing element (illustrated in figs. 1-3) in combination with a backing structure in the reply filed on 8/16/2005 is acknowledged.

The traversal is on the ground(s) that (A) the inventions are not independent or distinct. This is not convincing. Each of the different representative species has features that are patentably distinct from the other species. As such, the inventions are patentably distinct from each other. (B) It is argued that the requirement for serious burden is not met. This is also not convincing. While there are common search aspects for each of the different species, there are also differing search aspects for each of the different species. Text searching is commonly performed for each species and the various different characteristics of the different species dictate different text searches. Further, even if the searches were identical, it takes considerably more time to search for a plurality of inventions and prosecute their associated additional claims on both grounds of applied art and 35 USC 112 issues than it takes for a single species or invention. In view of the fact that the examiner has only a limited amount of time to prosecute each invention, it seems in the best interest of both applicant and the Office that enough time be provided to produce a resultant quality product.

The requirement is still deemed proper and is therefore made FINAL.

Claims 9-11, 21, and 24 are withdrawn from consideration as being directed to non-elected species. Claim 11 contains the claim limitation "corrugated" that is directed to the embodiment that includes fig. 4. Claim 21 contains the claim limitation directed to "a protective outer cover" that is directed to species A'.

Art Unit: 3641

Claims 1-8, 12-20, 22-23, and 25-27 read on the elected species A and an action on these claims follows.

2. Claims 13-14 and 25-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13, it is not understood as to what is intended by the phrase "the ratio of thickness of at least one layer of the backing to an equivalent diameter of the fibers is no more than about 20.0". What is an equivalent diameter? Further, fiber diameters vary not only dependent upon the type of fiber selected but also upon the particular fiber. For instance, all Kevlar fibers are not of the same diameter. Consequently, the parameters for determining this ratio are too uncertain and indefinite to have any clear and certain meaning.

Claim 14, lines 2-4; claim 24, lines 9-11; and claim 25, lines 6-8 are indefinite for the same reasons listed above with regard to claim 13. In claim 25, use of the phrase "a ratio of thickness of the backing portion to thickness of the metallic facing element is selected to be effective against a predetermined penetration threat" makes the claim indefinite as to what ratios may or may not be inclusive in such terminology.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 12-15, 20, 22-23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Meyer.

Meyer discloses a metallic armor assembly comprising:

- a) a metallic facing element with perforations to reduce the density by at least 20%; 57, 58, 59;  
col. 5, lines 68-72
- b) a fiber composite substrate backing; and 1, 3, 5; col. 5, lines  
48-57
- c) an adhesive layer. 40

5. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer in view of Dietz et al. or Cook.

Meyer applies as previously recited. However, undisclosed is a backing layer that is composed of fibers whose longitudinal axes are arranged in parallel. Dietz et al. and Cook each teach a backing layer composed of fibers whose longitudinal axes are arranged in parallel (fig. 4 of Dietz et al. and fig. of Cook). Applicant is substituting one type of backing layer for another as explicitly encouraged by the primary reference (see col. 5, lines 45-67 of Meyer). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Dietz et al. or Cook to the Meyer metallic armor and have a metallic armor with a different type of backing layer.

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer in view of Hartmann et al..

Meyer applies as previously recited. However, undisclosed is a fiber composite substrate with an areal density of at least 2.5 pounds per square foot. Hartmann et al. teach a fiber composite substrate with an areal density of at least 2.5 pounds per square foot (col. 3, lines 34-44). Applicant is substituting one fiber composite substrate arrangement for another in an

Art Unit: 3641

analogous art setting as explicitly encouraged by the primary reference (see col. 5, lines 47-67 of Meyer). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Hartmann et al. to the Meyer metallic armor and have a metallic armor with a different type of fiber composite substrate.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer in view of Li et al..

Meyer applies as previously recited. However, undisclosed is a fiber composite substrate with a fiber content of 75% or more. Li et al. teach a fiber composite substrate with a fiber content of 75% or more (col. 5, lines 10-12). Applicant is substituting one fiber composite substrate arrangement for another in an analogous art setting as explicitly encouraged by the primary reference (see col. 5, lines 47-67 of Meyer). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Li et al. to the Meyer metallic armor and have a metallic armor with a different type of fiber composite substrate.

8. Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer in view of Auyer et al. (593).

Meyer applies as previously recited. However, undisclosed is a backing portion that is about 4 to 10 times or at least about 7 times the width of the metallic facing element. Auyer et al. (593) teach a backing portion that is about 4 to 10 times or at least about 7 times the width of the metallic facing element (see fig. 1 (compare 24 to 14 or compare 28 to 14)). Applicant is substituting one backing layer arrangement for another as explicitly encouraged by the primary reference (see col. 5, lines 45-67 of Meyer). It would have been obvious to a person of ordinary

Art Unit: 3641

skill in this art at the time of the invention to apply the teachings of Auyer et al. (593) to the Meyer metallic armor arrangement and have a metallic armor arrangement with a different width backing layer.

9. Claims 1-3, 12-15, 22-23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Auyer et al. (593).

Auyer et al. (593) disclose a metallic armor assembly comprising:

- a) a metallic facing element with perforations to reduce the density by at least 20%; and
  - 14 or 18
  - cols. 6, 7
- b) a fiber composite substrate backing.
  - 38; col. 2, lines 47-51

10. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Auyer et al. (593) in view of Tarsi et al..

Auyer et al. (593) apply previously recited. However, undisclosed are circular apertures of a particular size and spacing to correspond to the diameter or caliber of the projectile encountered. Tarsi et al. teach circular apertures of a particular size and spacing to correspond to the diameter or caliber of the projectile encountered (see pages 2-6). Applicant is substituting one particular aperture shape and arrangement as explicitly encouraged by the secondary reference (see Tarsi et al. page 5, lines 2-6; page 4, lines 19-21; page 2, lines 18-26). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Tarsi et al. to the Auyer et al. (593) metallic armor and have a metallic armor with a different type of aperture with associated aperture size and spacing.

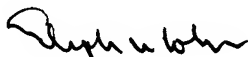
Art Unit: 3641

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 571-272-6877.

The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The Central FAX phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.



**STEPHEN M. JOHNSON**  
**PRIMARY EXAMINER**

Stephen M. Johnson  
Primary Examiner  
Art Unit 3641

SMJ

September 1, 2005